

MAR 11 2005

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UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Thomson

Examiner:

Art Unit: 1742

Serial No: 10/798,039

Filed: 03/11/2004

For: HIGH STRENGTH STEEL PRODUCT WITH IMPROVED FORMABILITY AND
STEEL MANUFACTURING PROCESS

Docket 8221

9213 Chillicothe Road
Kirtland, Ohio 44094

March 9, 2005

COMMISSIONER OF PATENTS
P. O. BOX 1450
Alexandria, Virginia 22313-1450

INFORMATION DISCLOSURE STATEMENT
PURSUANT TO 37 C.F.R. §§1.97 AND 1.98

Dear Sir:

A. (1) Applicant hereby discloses the following Documents pursuant to 37 C.F.R. §1.98:

- | | <u>Publication No.</u> | <u>Publication Date</u> | <u>Inventor</u> |
|----|---|-------------------------|-----------------|
| 1. | US 4,167,105 | September 11, 1979 | Harris |
| 2. | US 5,906,691 | May 25, 1999 | Burnett |
| 3. | Crowther et al., "The Evolution Of Microstructure During Thin Slab Direct Rolling Processing in Vanadium Microalloyed Steels", ISIJ Intern'l, Vol. 42 (2002), No. 6, pp 636-644 | | |
| 4. | Glodowski, "VANADIUM MICROALLOYING IN STEEL SHEET, STRIP AND PLATE PRODUCTS", USE OF VANADIUM IN STEEL, A SELECTION OF PAPERS PRESENTED AT THE VANITEC INTERN'L SYMPOSIUM, Beijing, | | |

China, 13-14 October, 2001, published by VANITEC, VANADIUM
INTERNATIONAL TECHNICAL COMMITTEE, WESTERHAM, KENT,
ENGLAND, 2002

5. Zajac, "FERRITE GRAIN REFINEMENT AND PRECIPITATION
STRENGTHENING IN V-MICROALLOYED STEELS", 43rd MWSP CONF.
PROC., ISS, VOL. XXXIX, 2001, PP.497-508
6. Flemming et al., "EXTENSION OF PRODUCT RANGE AND PERSPECTIVES
OF CSP TECHNOLOGY", MPT Metallurgical Plant and Technology
International, Vol. 23, Issue No. 1, February 2000
7. Glowdowski, "EXPERIENCE IN PRODUCING V-MICROALLOYED HIGH
STRENGTH STEELS BY THIN SLAB CASTING TECHNOLOGY", presented
at the International Symposium On Thin Slab Casting and Rolling, Guangzhou,
China, December 2002, pp.1-11.

B. Copies of the patents are not included but copies of the literature are included
herewith pursuant to 37 C.F.R. §1.98.

C. Explanation of Relevance pursuant to 37 C.F.R. §1.98.

1. US 4,167,105 issued 9-11-1979 to Harris discloses a tandem mill drive control system.
2. US 5,906,691 issued May 25, 1999 to Burnett discloses an induction hardened
microalloy steel having enhanced fatigue strength properties.
3. Crowther et al., "The Evolution Of Microstructure During Thin Slab Direct
Rolling Processing in Vanadium Microalloyed Steels", ISIJ Intern'l, Vol. 42 (2002), No.

6, pp 636-644 discloses the evolution of microstructure on two low carbon microalloyed steels.

4. Glodowski, "VANADIUM MICROALLOYING IN STEEL SHEET, STRIP AND PLATE PRODUCTS", USE OF VANADIUM IN STEEL, A SELECTION OF PAPERS PRESENTED AT THE VANITEC INTERN'L SYMPOSIUM, Beijing, China, 13-14 October, 2001, published by VANITEC, VANADIUM INTERNATIONAL TECHNICAL COMMITTEE, WESTERHAM, KENT, ENGLAND, 2002 indicates that Vanadium has proven to be a popular choice as a microalloy for flat rolled sheet and plate steels.

5. Zajac, "FERRITE GRAIN REFINEMENT AND PRECIPITATION STRENGTHENING IN V-MICROALLOYED STEELS", 43rd MWSP CONF. PROC., ISS, VOL. XXXIX, 2001, PP.497-508 indicates that the work has concentrated on two strengthening mechanisms in V-microalloyed steels: (i) grain refinement by promoting the formation of intragranular ferrite, and (ii) the role of nitrogen and carbon in precipitation strengthening by interphase and random precipitation of V (C,N) in ferrite.

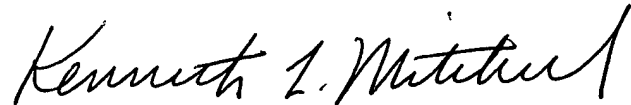
6. Flemming et al., "EXTENSION OF PRODUCT RANGE AND PERSPECTIVES OF CSP TECHNOLOGY", MPT Metallurgical Plant and Technology International, Vol. 23, Issue No. 1, February 2000 indicates that the experiences gained during the past approximately 10 years show the CSP technology has successfully confronted the exacting challenges in regard to product range extension and implementation of modern material refining processes.

7. Glowdowski, "EXPERIENCE IN PRODUCING V-MICROALLOYED HIGH STRENGTH STEELS BY THIN SLAB CASTING TECHNOLOGY", presented at the International Symposium On Thin Slab Casting and Rolling, Guangzhou, China, December 2002, pp 1-11 indicates that Vanadium-nitrogen microalloying has proven to be highly compatible with the thin slab cast and direct charging steelmaking process.

No fee is believed due as this information disclosure statement is being timely filed. Please charge deposit account 23-3060 if any fee deficiency exists.

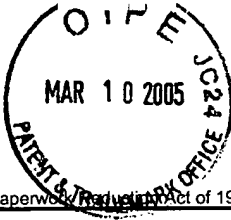
Respectfully submitted,

WOODLING, KROST & RUST

A handwritten signature in black ink, reading "Kenneth L. Mitchell". The signature is written in a cursive style with a horizontal line underneath the name.

Kenneth L. Mitchell
Reg. No. 36,873
(440) 256-4150

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Complete if Known	
		Application Number	10/798,039
		Filing Date	March 11, 2004
		First Named Inventor	Thomson
		Art Unit	1742
Examiner Name			
Sheet 2	of 2	Attorney Docket Number	8221

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	3	Crowther et al., "The Evolution Of Microstructure During Thin Slab Direct Rolling Processing in Vanadium Microalloyed Steels", ISIJ Intern'l, Vol. 42 (2002), No. 6, pp 636-644	
	4	Glodowski, "VANADIUM MICROALLOYING IN STEEL SHEET, STRIP AND PLATE PRODUCTS", USE OF VANADIUM IN STEEL, A SELECTION OF PAPERS PRESENTED AT THE VANITEC INTERN'L SYMPOSIUM, Beijing, China, 13-14 October, 2001, published by VANITEC, VANADIUM INTERNATIONAL TECHNICAL COMMITTEE, WESTERHAM, KENT, ENGLAND, 2002	
	5	Zajac, "FERRITE GRAIN REFINEMENT AND PRECIPITATION STRENGTHENING IN V-MICROALLOYED STEELS", 43rd MWSP CONF. PROC., ISS, VOL. XXXIX, 2001, PP.497-508.	
	6	Flemming et al., "EXTENSION OF PRODUCT RANGE AND PERSPECTIVES OF CSP TECHNOLOGY", MPT Metallurgical Plant and Technology International, Vol. 23, Issue No. 1, February 2000	
	7	Glodowski, "EXPERIENCE IN PRODUCING V-MICROALLOYED HIGH STRENGTH STEELS BY THIN SLAB CASTING TECHNOLOGY", presented at the International Symposium On Thin Slab Casting and Rolling, Guangzhou, China, December 2002, pp.1-11.	

Examiner Signature	Date Considered
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.
This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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